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PUBLIC LANDS

DEPARTMENT OF THE INTERIOR
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Our PUBLIC LANDS



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COVER

One of the Bureau of Land Management's most serious responsibilities is to protect millions of acres of public lands from the ravages of wild-fire. This summer, following a dry spring and scant snow cover in many areas, BLM's skilled firefighting crews were kept busy from the parched rangelands of Utah to the remote forests of northern Alaska—where our October cover was photographed. For more on the BLM fire story, see page 4 of this issue.

Created in 1849, the Department of the Interior—America's department of natural resources—is concerned with the management, conservation, and development of the Nation's water, wildlife, mineral, forest, and park and recreational resources. It also has major responsibilities for Indian and Territorial affairs.

As the Nation's principal conservation agency, the Department works to assure that nonrenewable resources are developed and used wisely, that park and recreational resources are conserved for the future, and that renewable resources make their full contribution to the progress, prosperity, and security of the United States—now and in the future.

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DEPARTMENT OF THE INTERIOR

Stewart L. Udall, Secretary

BUREAU OF LAND MANAGEMENT

Charles H. Stoddard, Director

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Colorado Fish and Game Department

The Sportsman's Responsibility

As the red and gold splashes of autumn color work their way from the mountain peaks into the valleys, Americans across the land enjoy one of the greatest of outdoor sports, hunting. In many remote areas of the public lands, hunting ranks as one of the primary uses, equal in importance to livestock grazing. Access, across adjacent private land, depends in large part on cooperation between hunters and ranchers. Often landowners recall gates left open, cattle and ranch buildings used as targets, and similar bitter experiences. Yet their lands remain open to the hunter who uses common sense, courtesy, and respect for rights of others—and the sense of responsibility that marks the true sportsman.



BLM's Flying Firemen

by James E. Lee
Editor, Our Public Lands

SWINGING from their chutes above a raging forest fire miles north of the Arctic Circle, three Bureau of Land Management smokejumpers drop toward their day's work. Part of the complex team of flying firemen used to overcome vast distances and penetrate trackless wilderness, the skilled jumpers have helped reduce a fire toll that once averaged 1 million acres annually in Alaska to only a few thousand acres in 1963.

During the last century an estimated 80 percent of Alaska has burned over at least once. Caused by lightning, settlers, natives, and prospectors, the fires have held back what could be highly productive forests. BLM's present responsibilities include protection for some 225 million acres in Alaska, practically all of the forests and grasslands south of the forbidding Brooks Range.

Making adequate protection possible in Alaska's huge expanse is a fleet of red-and-yellow airplanes, a network of radios, and a skilled group of dedicated men. Required to rush to fires as far as 450 miles from their headquarters, the firefighters live by their radios during the April-to-July fire season.

Combining a one-two punch of smokejumpers and fire-retarding borate bombers, the flying firemen may drop a dozen men and thousands of gallons of borate slurry on a single small fire—catching it while it's small and easily controlled. With few natural barriers, a lightning fire could sweep a million acres—and this has happened thousands of times in Alaska's history. Now, with the men and equipment shown here, BLM is keeping the fire loss at an alltime low.



Suiting up for a jump into a fire north of Fairbanks, a BLM smokejumper dons his 40-pound suit with protective mask and survival gear.



Silhouetted against an afternoon thunderstorm, two jumpers drop from a low-flying DC-3 over a Tanana River fire. The jumpers are mainly college men, working for the summer season.

(Continued on next page)

Jumpers on their way home from a fire met this Grumman Goose on the Yukon River.



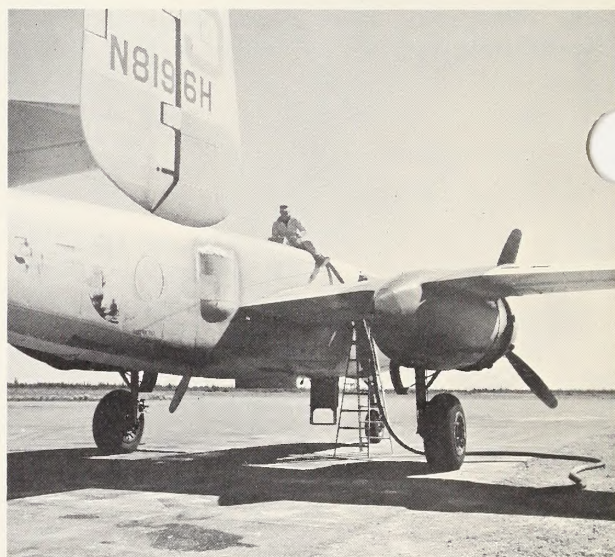


Flying Firemen

Alaska's vast distances require air travel to most fires. Upper left, emergency firefighters unload from a charter flight. Center, above, fire bosses confer beside a light plane used in spotting and directing operations. Upper right, firefighters load food and equipment in a Grumman Goose for an amphibious landing near a new lightning fire.



Above, crews mix borate with water to form a thick slurry. Right, the slurry is pumped into a World War II bomber converted for firefighting. Below, a B-25 makes a pass over a spreading fire, dumping 500 gallons of fire-retarding slurry on the first of two bombing runs.





Roaring across a hillside and creating its own draft, a range fire in southern Idaho consumes all ground cover before it—leaving soil bare for later erosion.

Spraying water from a high pressure nozzle, BLM crewmen wet down a fire line in dense sagebrush. Pumper trucks jolted across rugged terrain to reach the fires.

Summer Fires Strike Idaho

IN a series of lightning fires extending over a 10-day period, fire control men in Idaho worked night and day combating blazes in early August. Extreme low humidity—only 2 percent in Hells Canyon—allowed new fires to race across tinder-dry rangelands. Using Shoshone-Bannock Indians, Mexican nationals, supervisors flown in from Alaska, and trained local crews, BLM's Idaho fire protection experts held losses to 130,000 acres against heavy odds.



Reminiscences of Ferry Carpenter: Part III

Beginnings of the Division of Grazing

by Farrington R. Carpenter

Former Director, Division of Grazing

In previous issues Mr. Carpenter—who directed the Division of Grazing from its establishment in 1934 until 1938—explained how the Taylor Grazing Act came about. Creating a new agency with no appropriations and a handful of men, he solved problems as they arose. Earlier he discussed formation of the grazing advisory boards, how he met the problem of “how near is near,” and why the rule of commensurability was adopted.

WHEN we made a mistake we admitted it, and it had an electrical effect on the American people. They had never heard a Government employee say, “I made a mistake and I was a durned fool and I am going to change it.” It just isn’t done that way. You understand we weren’t a typical Government service and we were going to get along with the stockmen and give them faith in the Bureau that administered the land. We weren’t trying to pamper them, but we were trying to keep public relations on a basis where they would recognize they were getting a fair American deal.

The first year we told them, “When your board meets and your 10 representatives are there for the sheepmen and 10 for the cowboys, you’re going to have to agree by two-thirds majority on some rule for prior use. The first year that rule—whatever it is—will apply to your district. Then we’ll all get together in Salt Lake City



and fight it out, and we'll have one rule for the United States."

So they started out. Here was a district where the operators were largely oldtimers, and they voted the rule that you had to show 20 years of continuous use of the range. Then some of them found they hadn't used the range continuously—so they said 15 out of 20 years gives you a prior right. Then there were other sections of the range that had just opened up. These operators said anybody using it last year should have prior rights, so anybody using it in 1933 should have prior rights.

Then some fellow came in and said, "My wife had a stroke that year and I had to move to Arizona. I let my neighbors use that range in 1933 but I've been here all my life. Are you going to kick me out?" Well, we couldn't go that way.

Then we came to the real problem—what about prior rights?

Here was a spot in Idaho where the woolgrowers were an organized bunch, and they had Forest Service permits for 40,000 sheep. They wanted a permit to run those sheep on the public domain.

Now the little fellows in the Snake River Valley had a system there. They'd raise alfalfa 2 or 3 years, then put it in barley and then back in alfalfa. And when the range was bad, the sheepmen would come in and buy their hay at \$5 a ton. They were the only customers the farmers had—and the sheepmen made big money because they only bought hay when they had to. The little farmers in the valley hated their guts.

Then a county agent went up and down the valley and organized all these fellows and said, "Boys, the day of reckoning is here. The United States has said the public range shall go to these people with commensurate property—and you and I have that property. These big sheepmen haven't got the property and we're going to take the range over."

He was their spokesman and he said to us, "You're not going to hand all this public range in the State of Idaho to these fellows who have robbed us and stolen all our hay for all these years. We've paid our taxes; our assessments are bigger than theirs. We're going to have our share of the range and we're going to have it all and we'd like to kick them all into eternity." That was the battle and there we were.

One Rule for the United States

What were we going to do? Were we going to turn the established sheep industry out the front door and put a new bunch in? Well, fortunately or unfortunately, the act contained a clause saying we should

respect prior rights. These sheepmen had the range for 20 years.

All the fellows who had been using the public range for 20 years voted for 20 years as being prior rights. And all the fellows who had been on 5 years voted for 5 years, and all the fellows who had been on for only 1 year voted for 1 year. What was going to be the rule of prior rights? How much prior use of the range did you have to have in order to submit your commensurability right and get a permit? I didn't know what to say.

So the really hot battle in setting up the regulations for the Taylor Act was what was prior use of the range. And we were close to 3 years in solving it. After we solved it for the north, it wouldn't go in the south because of the water rights. In the south it didn't matter how long you had used the range, if you didn't have water rights you couldn't continue to use it.

After many, many battles, this is what they finally decided. Anyone who in the 5 years immediately preceding passage of the Taylor Act had used the range in connection with his land, either continuously for 2 years or any 3 years in that period, had prior use rights.

We Live by Compromise

That rule was successful. It barred some people who should have had priority, but it took in the great majority—and in this country when we make a rule we're a majority country. We live by compromise.

When it was all decided the smart boys got out and bought properties that had been used in connection with the range. It wasn't the individual that used it, but the property itself that was connected with the range.

Maybe you bought a ranch in 1934 when the Taylor Act was passed, but that ranch had been used in connection with the public range for the 5 previous years. How did we establish that? Well, the operator had to come in and sign an affidavit that he had used it and as near as he could remember, the dates and the number of cattle.

Now when a fellow is getting a favor from the Government, he has a very loose idea of ethics. His idea is to get as much as possible. Well, this is the way we found out what was true. The district grazer called the board in and among the members there was somebody who knew the operators and it was his business to say, "No; that fellow never had that many cattle. He never ran over 35 head."

Then the fun began. You sent a notice to the fellow, telling him if he was dissatisfied he could make an appeal to the board and explain the circumstances. The first appeal really took the salt out. He had to come in

and face his neighbors on the board. So what was the appellant going to say? Ninety percent of the appeals were dismissed right then and there when the fellows appeared before the boards. The other 10 percent went on to the district grazier, and before it was all done everything worked out.

Getting Fired Gives You a Funny Feeling

They could put in for anything they wanted, and we told them what we thought they had coming. If they didn't like it they could appeal to an independent tribunal. That system worked. But that system was so very disliked in Washington that after I operated for a year or 18 months, I found I just didn't have a job.

I was in Albuquerque one day and got a letter from the Secretary, telling me to appear in his office for a hearing. I went to his office and he had the Solicitor General and a bunch of other top men sitting around. He handed me a sheet with 12 charges against me. One of them was that I told some fellows to haul their own salt out on Government range. Well, that was against the law. Then there were all kinds of other charges against me. The Secretary fired me right then and there. Getting fired gives you a funny feeling.

Well, the ranchers out on the range created a disturbance. These boys had their advisory boards and they pointed out they liked this way of doing things. They just rained the telegrams in on Franklin D. and he called Harold Ickes and told him he better take that son of a gun back. So back I went.

Harold didn't love me after that. He'd four-foot me everytime I went by if he could do it, but sometimes that is what you have to face.

Then You Get the Wildlife People

There was this fellow named Ding Darling, who had been a great cartoonist in Des Moines, Iowa. He was also a wildlife enthusiast. So nothing would be more natural than that he be appointed head of what they then called the Biological Survey. Ding was what we called a robin's egg conservationist.

Well, if you're a robin's egg conservationist you are really a conservationist. He believed that the world was made to preserve whooping cranes. That's a crane that gives an unusual whoop and he wanted to preserve it, and there was only one bunch left. He came to me and said he had to have some land.

He had to have a little piece of land around a lake in Oregon for the whooping cranes. Ding was a very resourceful guy and knew how to play his cards. He couldn't get that reservation without the sanction of the Department, so he went to the Secretary and said, "Mr.

Secretary, the whooping cranes are going out of existence and we have to preserve them."

Well, Ickes thought it was a good idea too. Ding said, "I'd like to go over and see the President." Well, the Secretary arranged an interview with the President.

Then Ding did a smart thing. He took a map of the whole United States. When you get a map of that size, a point about as big as a pinprick is about 10,000 acres. So Ding went over to see Franklin D. and told him he was going to preserve disappearing wildlife and needed some land used by the stockmen. He said these stockmen were pirates on the range, and they were only interested in overgrazing it.

So, after a long speech, Ding said, "Now, Mr. President, I want a few little reservations for wildlife to keep them from disappearing. I just want a little range around where these little spots are. You can hardly see them on the map."

Of course Franklin fell for it and he wrote on the margin of this map, "Harold, do not let any of these be put into grazing districts until you hear from me. FDR."

Ding marched back and handed this to Harold. Whenever you had anything from the White House, you just doubled up and made bows. Harold passed it down to me. When Ding sat down on the corner of my desk, I said, "You son of a gun, you got 7 million acres for the whooping crane."

Well, you get outjockeyed once in a while, and you have to make the best of it. I could see that Ding was smarter than I was and that he was getting ahead of me. I thought, "If you can't lick 'em, join 'em."

So I said, "Now, Ding, we're having a meeting down in Salt Lake City and these wicked stockmen are going to decide on the range use rules. I want you to come down there and meet with them. These fellows control the land where the wildlife is."

We had some very fine men on our advisory councils. The people of the districts elected their responsible leaders. We appointed a very distinguished committee to work with Ding. Believe me, they worked with him. They got him in a very amiable frame of mind and told him about the bands of game he didn't know about and neither did his Biological Survey.

We agreed that we would have one wildlife man on every advisory board in the United States and then started off with a great cooperative effort between the wildlife people and the stockmen. There's no need to have trouble and opposition; it could all be worked out and was worked out.

CONSERVATION BRIEFS

...FROM THE BUREAU OF LAND MANAGEMENT

Federal Government Sues to Void Patents in Gold "Salting" Case

The Government took legal steps in Phoenix September 9 to revoke patents (deeds) to some 8,200 acres of former public lands in Arizona on the ground that they were obtained fraudulently through gold "salting." The Department of the Interior said the civil suit, filed by the Justice Department in U.S. District Court, is an outgrowth of the gold "salting" uncovered last spring between Phoenix and Wickenburg. "Salting" a claim is adding gold to make it appear to have a higher content. One of the rare instances in which the Government has sued to revoke land patents, the action climaxed more than a year and a half of investigations by BLM and the FBI.

New BLM Director Urges Plans to Meet Growing Demands for Recreation

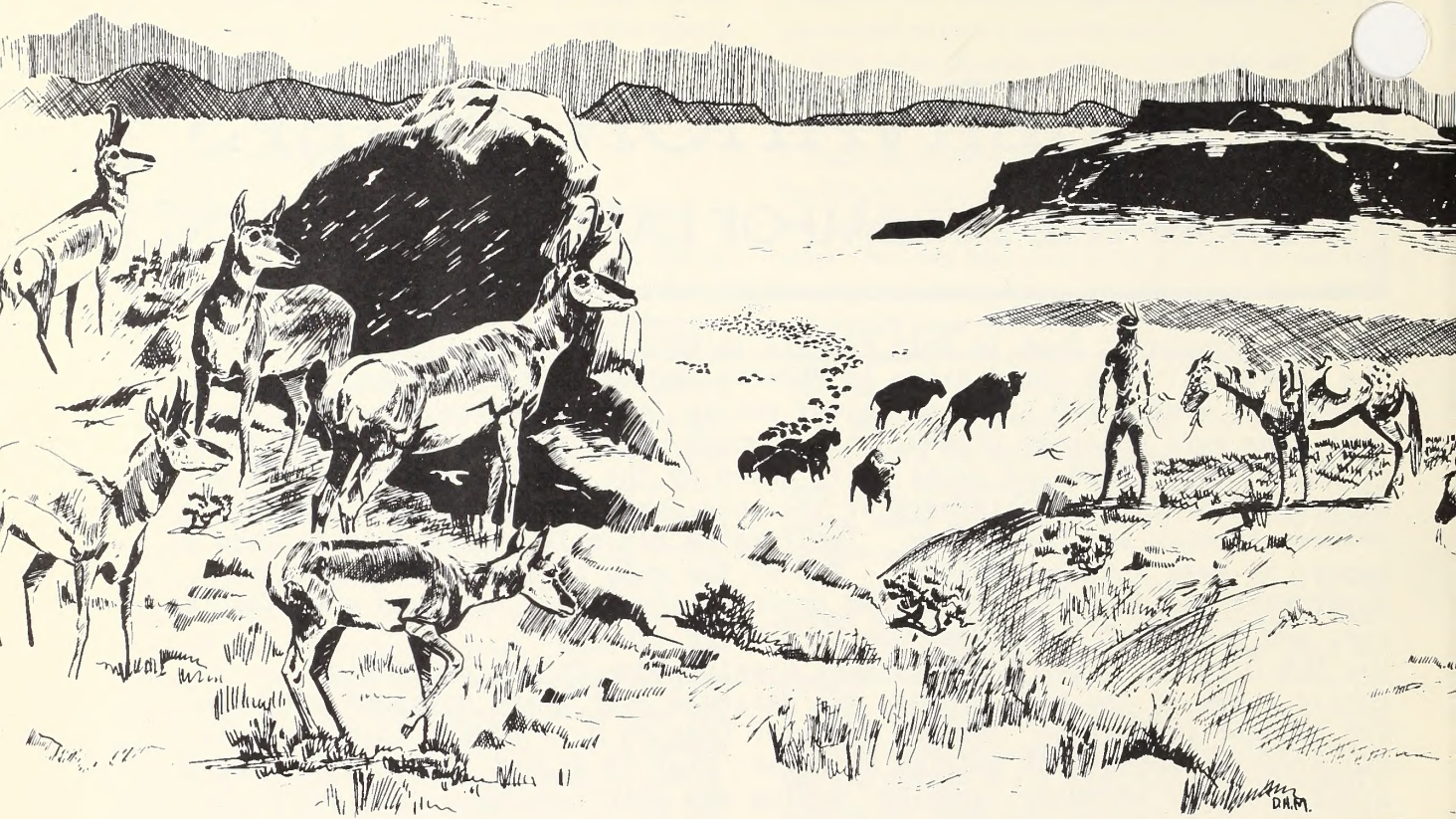
Public lands of the West contain the Nation's last great untapped potential for outdoor recreation, new BLM Director Charles H. Stoddard told the Soil Conservation Society of America at Logan, Utah in August. He said that many areas used for forestry, grazing, mining and other economic ends are also receiving heavy recreation use, despite the absence of even the most basic health and safety precautions. The BLM Director briefly explained some of the basic land management difficulties that would affect a program of outdoor recreation for the public lands. "Problems of conservation, land tenure, and outdated land laws need to be solved before a recreation program could be completely effective. Classification of the public lands to ascertain present and probable future uses will be a key to long range planning," he told the Soil Conservation Society.

Public Land Review Commission Proposed

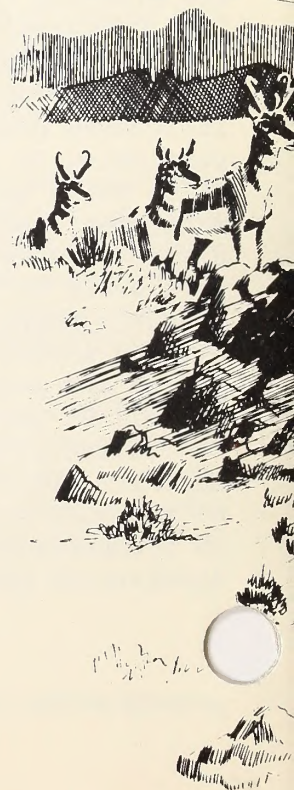
House Interior and Insular Affairs Committee Chairman Wayne N. Aspinall has introduced proposed legislation (H.R. 8070) calling for a 25-member review commission to examine the entire field of public land laws. The commission, which would include members of Congress, representatives of Federal resource management agencies, and representatives of interested groups, would employ a staff to collect and analyze data over a 3-year period. Meanwhile, interim laws would be passed—to expire 6 months after the commission's work ends.


Oregon's Rogue River Trail for Hikers

After a series of public hearings to determine sentiment regarding uses of horses and motorcycles on the Rogue River Trail in Oregon, BLM State Director Russell E. Getty announced in August that the major recreational asset would be limited to hikers only along a 26-mile stretch between Almeda Bridge and Marial. Recently designated as a "wild river," the Rogue flows through some of the most scenic lands administered by BLM in western Oregon. First used by prospectors many years ago, the historic trail has been improved as an Accelerated Public Works project in recent months.



The Pronghorn Antelope— a Western Legend





ARUMP flashes white at the head of the herd. The signal is caught and relayed by one animal, then two more, and in another instant the whole group is alert, stiff with the awareness of danger, tails twitching reflexively. A big doe breaks. The herd follows in bounding paces, gaining incredible speed over the open field. Frenzied, yet beautifully agile, they leave an enemy sulking in the dust.

The animals are antelope—the field is in the American West. Nowhere else in the world is this particular species, called the pronghorn, found, and it is America's only native antelope. The herd's race for survival could have taken place, over this same ground, on any given day since prehistoric times.

The pronghorn is so deeply rooted in Western history that it has become something of a legend. Early settlers of the West found the land teeming with these graceful animals, realized their economic value, and proceeded to exterminate them by the millions. So intense was the slaughter that, by 1900, the species was almost extinct. The pronghorn was made a part of American lore and consigned to a place in the dead past.

But the funeral was premature. It was not suspected then that antelope herds would again roam the West. Through the work of conservationists, though, the species was saved. And today the pronghorn is being maintained in such large numbers that it has become the country's No. 2 big game animal, second only to deer.



Biography of a Pronghorn

by Sherman Pearl

Land Law Examiner—Nevada



For several days after birth, the wobbly kid antelope lies prone, concealed by his coloring and nearby brush.

Healthy adult does, browsing on good range, generally have twin fawns—which she nurses for a month or so.



SOMEWHERE in the West, in a secret shelter, hidden from all eyes but his mother's, an antelope kid was born. The event might have occurred ten or a hundred or a thousand years ago, in any of a million locations; the story remains the same. The only essential fact is the kid himself, since his birth represented a renewal of the herd and perpetuation of the species.

His mother was a conscientious doe. When, in late May, she knew that birth was imminent, she sauntered proudly from the herd, carefully studying the brush around her. She finally came across a secluded, leafy bower, and there she settled down. Before long, the newly born kid was lying beside her, along with his twin sister. He was yellowish-tan in color, blending discretely with the vegetation. Weak from the shock of entering the world, and realizing that his gangly legs could not yet support him, he lay this way for awhile, nursing from his mother and enjoying the warmth of her body.

Soon he was on his feet. His split hooves were slipping a little, and he felt unsteady, but like all pronghorns he was instinctively curious, and all the wonders of the earth were waiting to be explored. With his new powers of sight and hearing and scent and locomotion, he grew increasingly bold.

Caution was left to his mother. He and his sister were her whole concern, and she was always on the alert for the natural enemies, such as coyotes and eagles, which constantly imperiled her young. If an attack came, she would stand and fight with flashing hooves.

The kid had other concerns, new discoveries to make. The most exciting of these was his own speed. Someday, when fleeing from danger, he would reach speeds approaching 50 miles an hour, but now, just a couple of days old, he ran because running was in him. It was a fine time of life.

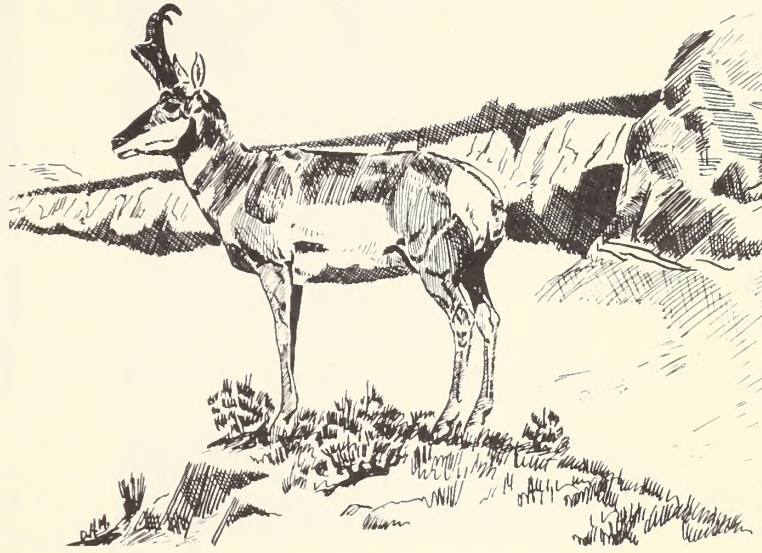
He and his sister and mother rejoined the herd, and there were many kids to romp with, and food was plentiful. By tasting many strange plants, he was quick to learn that forbs and herbs, grasses and shrubs, were the foods that suited him best. Much of his life?

activity would be determined by the availability of these plants. It wasn't long before he was on the move, with the rest of the herd, looking for an area with a greater abundance of forage.

During the migration, certain changes began to take place in the kid—he was growing up. His pelage began to darken to a buckskin color, except for the white marking on his neck and underside. Even more startling were the hard, bony horns that were growing from his head. An outer sheath began to form around the bone core, and the characteristic prongs that would unmistakably identify him as a pronghorn antelope were developing. His sister was growing horns, too, but they would not reach the size of his.

Winter was coming. The new grounds on which the herd settled were becoming icy. Food was scarcer, but the young adult antelope took solace in the fact that he hardly felt the cold. He had the ability to lay the hairs of his pelage flat in winter, and to hold them erect in summer, and so he was well insulated against the changing weather.

He watched the winter pass, and welcomed spring, and became an integral member of the herd, and the pattern of his life was set. The life he had been granted, however, carried with it one overriding obligation, and that was to help create new life. This responsibility fell on him when autumn came. The offspring he fathered in September would be born, as he was, in May, and they would take their places with the herd, continuing the unbroken cycle of generations.

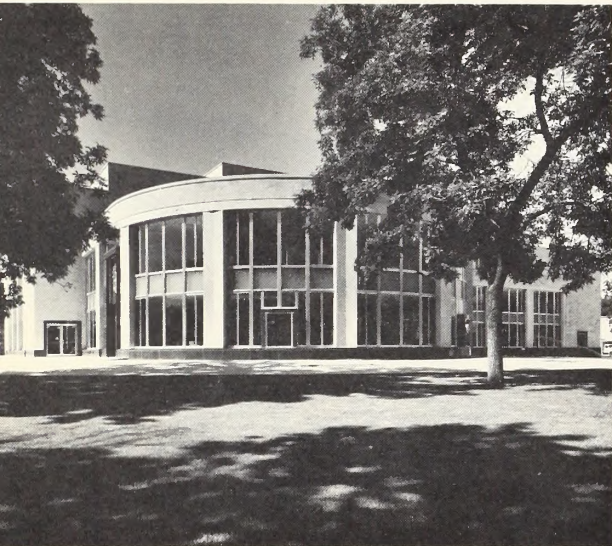


Above, the adult trophy buck is monarch of the plains.

BELOW: Six months after the kids are born they can keep pace with the swift-running herd of adults.



The Denver Public Library houses the Conservation Library Center in the modern building shown below.



Kenneth D. Watson



Denver Public Library

ABOVE: Arthur Carhart (left) and Denver Librarian John T. Eastlick discuss the growing volume of incoming material for the CLC. At right, entrance to the Conservation Library Center is through the library's Western collection.

A National Treasury of Conservation Literature

by Arthur H. Carhart

Consultant, Conservation Library Center

IT ALL seemed simple enough. I just wanted someone to take over some of the research material I had collected during four decades of activity in the natural resources field. Surely, I thought, there must be one or more libraries or collections which would welcome my modest treasures.

I wrote to a dozen national leaders in the field of conservation research. They all wrote back saying, in effect, "We know of no central place interested in collecting conservation library material."

Quite by chance, I dropped in on John T. Eastlick, Denver's librarian, and asked him the same question. No, he replied, but he had been thinking about establishing a collection of this sort in the Denver Public Library, already famous for its collections on western history, aeronautics, and the poet, Eugene Field.

Well, that's how it all began. That casual conver-

sation in August of 1960 led to the formation of the new Conservation Library Center of the Denver Public Library—the first of its kind, and already being received with an enthusiasm which promises to make it an important national institution.

Material is pouring in from all points of the compass, and from all kinds of sources; we are threatened with a shortage of shelf space, but we are actively seeking more material. Some financial support has come from the city of Denver and the American Conservation Association, headed by Laurance Rockefeller (but more help will be needed); and instead of quietly unloading my research material on someone else, I am up to my ears in work as a consultant, helping to organize tons of subject matter sent to us by dozens of other people. It's wonderful!

One basic test is applied to material: Is it helpful?



in mapping and carrying out protection and management of resources for future years? If so, we want it.

The hard lessons of the past are invaluable in building for the future. So the Conservation Library Center is gathering all available records bearing on America's management, mismanagement, conservation, and despoliation of its natural resources.

One of our first major acquisitions was a series of packing cases from Dr. Ira N. Gabrielson, president of the Wildlife Management Institute, consisting of rare and (in some cases) literally priceless reprints, bulletins, booklets, and reports accumulated during years in the Biological Survey and the Fish and Wildlife Service.

From another source, Miss Katherine Seymour, we acquired the records of the American Bison Society, and letters from a host of pioneering fighters for wildlife restoration.

We want material in any and all media if it tells a story that can assist sound resource management. Photos, movies, letters, memoranda, reports, handbooks, reference books, bulletins, field notes—all and more are welcome. Individuals have sent us single, prized items; agencies or associations have offered cartons full.

We now have on hand material sent in by 200 or more separate donors. And agencies of the U.S. Government—including the Forest Service and the Bureau of Land Management—have helped magnificently by recognizing that in CLC they can preserve valuable files and records which are not within the scope of official archives.

With the active help and cooperation of Forest Service officials, for example, CLC has notified several hundred USFS alumni that we welcome all those diaries, files, books, photos and other materials that they "haven't the heart" to destroy. As a result, we have old ranger diaries, photos, all kinds of memoranda. And we have a special arrangement which gives us the right of refusal to Forest Service material not wanted by the National Archives; this has brought us, among

other items, a 751-pound collection of newspaper clippings concerning forestry in the United States from 1890 to 1935.

Through the cooperation of BLM officials we have begun to gather some of their publications and other material.

Probably no other Federal agency has a longer or more interesting story to tell about conservation than the Bureau of Land Management and its predecessors, the General Land Office and the Grazing Service. There were epic battles waged by fieldmen trying to stop the plunder of timberlands and other resources. In one period, about a century ago, General Land Office officials were denounced by influential Members of Congress for their efforts to protect the timber on the public domain in Michigan from uncontrolled plunder; some even lost their jobs.

There must be hundreds of dusty corners in BLM offices, desk drawers, and private attics which contain material of great value to the Conservation Library, and thus to future generations of researchers. Many individuals may have become heirs to old maps, diaries, letters, photos, which may be of little use to them, but of priceless value to historians.

The center has a modest acquisition fund to pay for the cost of transportation, and even of packaging. If there are any questions about the usefulness of the matter, by all means write to the Conservation Library Center, Denver Public Library, 1357 Broadway, Denver, Colo., 80200.

As each contribution arrives, the name of the giver is noted, each item is listed, and then each batch of material is tagged with the donor's name and placed separately on a shelf, ready for full-scale cataloging. Everything is, of course, kept in a modern, fireproof building, and supervised by trained, professional librarians.

Some months ago, Dr. Gabrielson remarked, "You probably have collected here more basic information on conservation of all types than can be found anywhere else in one place."

That is CLC's strength and significance. Each acquisition becomes a key part of the whole, and each piece has increased its value because of association with other parts.

From its standing start only a couple of years ago, the center has already begun to make a major contribution to the cause of enlightened conservation. We didn't know what we were getting into on that day of August 1960—but we're mighty glad we went ahead. And, we fondly hope, countless Americans in the decades to come will be glad, too.



The plowed field at left is part of the completed Kenya water spreader project. Above, two Turkana women are shown seeding part of the project by hand. Sorghum, millet, cow peas, beans, and corn were planted. In the distance is one of the dikes.

Sharing Our Know-How

A Helping Hand in Kenya

THE idea of a system of small dikes to spread out scarce rainwater originated in the Near East, where even today you'll find traces of water spreaders thousands of years old. Because of their value on arid lands in the western United States, the Bureau of Land Management's range conservationists and engineers have become experts at designing and building modern versions of these systems.

Leland E. Fallon, a BLM range expert on loan to the Agency for International Development (AID), recently took the ancient idea to Africa, where natives in Kenya worked with him to build the water spreader pictured on these pages.

Intended to serve as a pilot model for the Turkana District in Kenya, the water spreader system was financed entirely by an interested Kenya Government—with AID providing Fallon's help as consultant.

With some 10,000 Turkana on famine relief since October 1961, conservation of rainfall in the district is perhaps one key to solving their problem. By spreading the water to soak into parched soil rather than allowing it to rush away in sand rivers, the 15-acre pilot project will show if food and forage can be made to grow.

The Government of Kenya employed more than 160 men and women to build a mile of diking—all with hand labor. The workers were paid 14 cents for an 8-hour day, plus a daily ration of cornmeal and a dried fish once or twice a week.

BLM, like other bureaus and offices in the Department of the Interior, supplies many technical experts to the international cooperation program. And often, as with the water spreader idea, it's a matter of teaching new people old tricks.



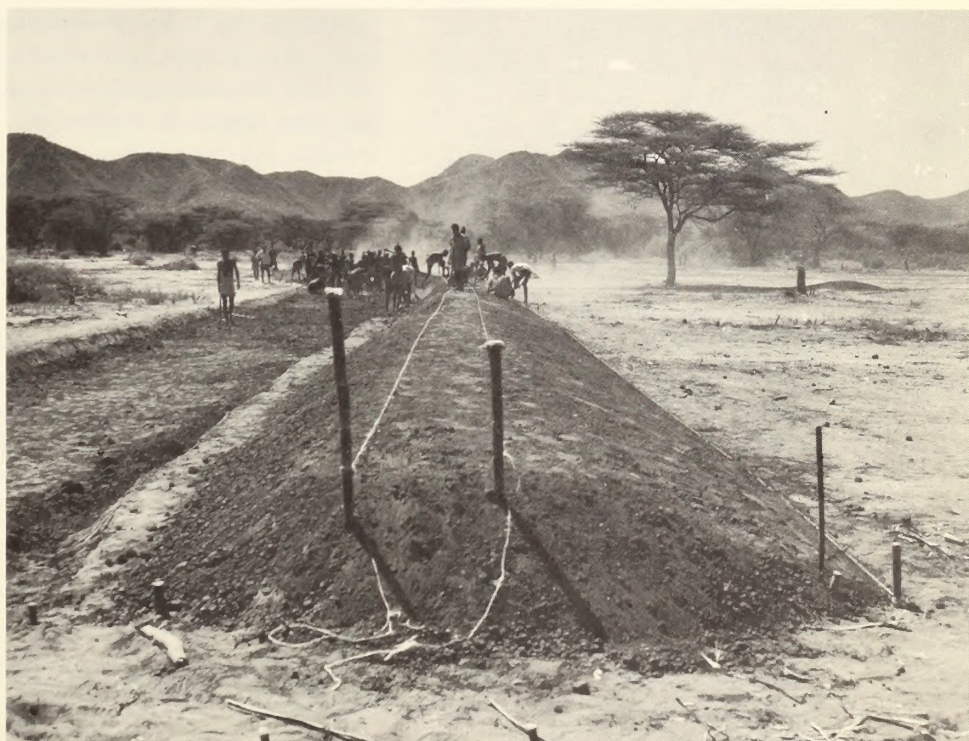
The dikes were constructed entirely by hand. Where dirt could not be placed directly on dikes, it was carried in large metal bowls called "karais."

The author discusses construction plans with two foremen, an Arab from Aden at left and a local Turkana in the center.



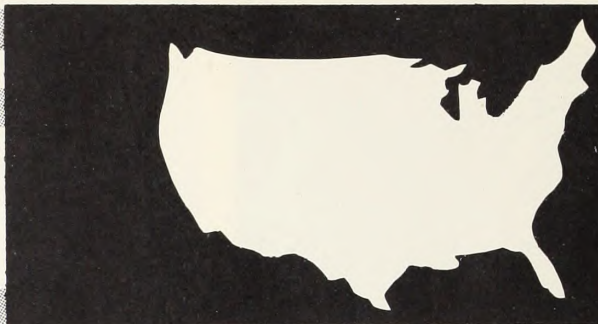
Some of the men and women working under Kenya's hot sun wore no clothing at all. Some 160 people worked on the project.

A completed section of the water-spreading dike shows how levels were established with pegs and twine. One mile of dike-ing was built, with 100 men completing 250 feet daily.





active acres



New Forest Conservation Projects Authorized Under Accelerated Public Works Program

The Bureau of Land Management will administer 32 new forest conservation projects under the Accelerated Public Works Program, as part of an additional \$8.7 million appropriation to the Department of the Interior, Secretary Udall announced in August.

The Department's appropriation will provide employment for some 2,100 chronically unemployed workers. "This is the amount of direct, on-site employment to be produced," Secretary Udall said. "At least an equal number of unemployed workers will find jobs because of the demand for goods and services these projects create."

BLM's 32 projects—representing an investment of \$1,933,000—will require an estimated 1,856 man-months, in 8 States.

Following is a description of the latest BLM projects approved for each State.

Alaska

Eklutna Lake: Protection and sanitation facilities at Eklutna Lake, near Anchorage, valued at \$33,000. The project began in August, and will provide 24 man-months of employment.

Miles Lake: Protection and sanitation facilities representing an investment of \$20,000 provided

at Miles Lake, near Cordova. The work will employ six men for 4 months.

Bayer Lake: Protection and sanitation facilities totaling \$18,000 scheduled for Bayer Lake, in the Palmer-Wasilla-Talkeetna area. Begun in August, the project is expected to provide 24 man-months of employment.

Fort Yukon: An office, warehouse, and garage to be built at Fort Yukon. Work totaling 36 man-months began in September at a cost of \$50,000.

Galena: A new fire control station, valued at \$50,000, at Galena in the Yukon-Kuskokwim area. The project, scheduled to produce 36 man-months of employment, began in September.

Bethel: A new office, garage, and warehouse at Bethel, valued at \$46,000. The project will require 34 man-months.

Idaho

Benewah: BLM will thin and snag fell 25 acres of timber in Benewah County, provide protection and sanitation facilities, and improve 9 miles of the St. Joe forest access road. Valued at \$79,000, the project was scheduled to begin in August and provides 72 man-months of employment.

Bonner: A similar timber stand improvement and hazard reduc-

tion project, including protection facilities, is earmarked for Bonner County. Representing an investment of \$30,000, the project will provide 24 man-months of employment.

Boundary: Fifty acres of timber stand will be improved in Boundary County, and protection and sanitation facilities provided at a cost of \$7,000. Created will be 12 man-months of employment.

Shookumchuck Creek: Construction of protection and sanitation facilities at Shookumchuck Creek will be undertaken. Valued at \$12,000, the project will provide 12 man-months of employment.

Kootenai: Construction of 12 miles of forest access roads is earmarked for Kootenai County. Representing an investment of \$67,000, the project will provide 60 man-months of employment.

Montana

Silver Bow Project: Seven miles of firebreaks and trails will be built in Silver Bow County for \$4,000. The project will provide 12 man-months of employment.

Nevada

Lincoln: BLM began an \$83,000 forestry project in Lincoln County late in August. Creating 96 man-months of work, the project will improve 2,200 acres of timber



Chips fly as slash from a forest thinning operation in Klamath County, Oreg., is chipped and spread to nourish other trees. The accelerated Public Works Program has made possible many forest improvement projects on public lands in the West.



In New Mexico, a worker pulls a mesquite plant as part of an APW project to restore Federal ranges in Grant County.

stand, provide 24 miles of access road improvements, reforest 500 acres, and include 500 acres of snag felling.

Mineral: A \$56,000 project will create 48 man-months of work in Mineral County. This project, begun in August, involves construction of the Corey Peak radio repeater station and construction and improvement of forest access roads.

New Mexico

Catron: A \$25,000 project to control mistletoe and snag felling on 2,500 acres in Catron County began in August. An estimated 24 man-months of labor will be created.

Taos: A snag felling project on 4,000 acres of timber stand started in August. Valued at \$50,000, this project will create 60 man-months of employment.

Valencia: Valencia County will receive a \$25,000 project, providing forest site improvement on 640 acres and 1,280 acres of snag felling. Created are 48 man-months of employment.

Oregon

Josephine: Late in August, BLM expected to start a \$166,000 forestry project in Josephine County, creating 120 man-months of employment. Work will include reduction of tree hazards, seed collection on 2,800 acres, and the construction and improvement of protection and sanitation facilities along the Rogue River Trail.

Galice Road: Construction of the Galice forest access road was set to begin in October. The \$200,000 project will provide an estimated 130 man-months of employment in Josephine County.

Wasco: Sixty acres of public land in Wasco County will be reforested for \$5,000. Twelve man-months of employment will be created.

Lakeview: The Green Mountain Lookout will be constructed with an investment of \$10,000. Located in Lake County, it will provide 12 man-months of employment.

Coos: A \$95,000 multipurpose forest improvement project was

started in Coos County in August. The work includes 150 acres of reforestation, 150 acres of site improvement, 1,300 acres of snag felling, slash disposal along 80 miles of roadway, and construction of 20 miles of control fence to protect forest seedlings. This activity will provide 108 man-months of employment.

Elk Creek Road: A \$137,000 project will provide 96 man-months of labor, to be invested in construction of the Elk Creek forest access road in Coos County.

Douglas: A multipurpose forest improvement project valued at \$289,000 is scheduled for Douglas County. Work includes felling tree snags, improving sites, reforestation, clearing away downed timbers from last year's Columbus Day storm, and protection and sanitation facilities at Wolf Creek and Little River. The 9-month project will create 372 man-months of work.

La Pine: Twenty-one miles of forest access road will be constructed in the La Pine area of Deschutes County for \$45,000.

Through this project, 36 man-months of work will be created.

Utah

Beaver: Timber stand improvements on 600 acres of public lands in Beaver County will be accomplished with an expenditure of \$30,000. The work will require 24 man-months of employment.

Carbon: Sites will be developed on 515 acres, and insect populations reduced on 40 acres in Carbon County. This is a \$14,000 project requiring 24 man-months of work.

Emery: Fifteen miles of fire control access roads will be built on public lands in Emery County for \$45,000. The work will create 36 man-months of employment.

Duchesne: Timber is to be improved and forest access roads constructed for \$50,000 in Duchesne County. The project will produce 36 man-months of employment.

Wyoming

Big Horn: Sites will be improved on 1,000 acres of public land in Big Horn County by a BLM project valued at \$42,000. Begun in August, the project was expected to create 48 man-months of employment.

Johnson: The Billy Creek access road will be built in Johnson County by a \$50,000 project. Provided are 36 man-months of employment.

Uinta: Insect control, timber stand improvement, and a new access road will be provided on public land in Uinta County by a \$100,000 project creating 96 man-months of employment.

Fifth American Forest Congress To Meet October 27-30 in Washington

Positive efforts by an administration to encourage improved co-

operation and good will between the two key conservation Departments of the Interior and Agriculture will receive a double-barreled salute on 2 consecutive days on October 28 and 29 as a part of the Fifth American Forest Congress, according to the American Forestry Association.

The two Secretaries will be honored at luncheons at the Statler-Hilton Hotel in Washington, D.C., headquarters for the Congress. Members of Congress and conservation groups will be invited to attend.

AFA forest congresses, which are in the nature of national "town meetings" on forest conservation, have been held periodically as the

Oregon BLM Employee Develops Safety Device for Chain Saws

A chain saw "dog" and safety guard has enabled BLM's Coos Bay (Oreg.) District to build up an impressive total of 30,000 man-hours with only one injury. Developed by Martell S. Meacham, the attachment prevents kickbacks when an operator is properly instructed in its use.

In the photograph, an operator



need arises since 1882. The first congress helped to arrest the mad pace of forest exploitation in America. The second, in 1905, saw the establishment of the national forests. The third, in 1946, was to survey resource drain caused by World War II and to chart a new course for positive action. The fourth, in 1953, called for reform of the mining laws affecting public lands and an accelerated program against forest fires, particularly incendiaryism.

Participation in the congress is open to all persons in attendance, including representatives of the general public. The meeting, taking the place of AFA's usual annual conference, opens on Sunday,

is shown holding the potentially dangerous chain saw with the "dog" attached. When the chain is moving toward the motor, the saw is pulled toward or into the cut and away from the operator. The dog is the slanting metal attachment bolted to the forward part of the saw blade.

Another device, not illustrated, is attached to the blade between the dog and the motor, and protects the operator's feet and legs if the saw is accidentally dropped.

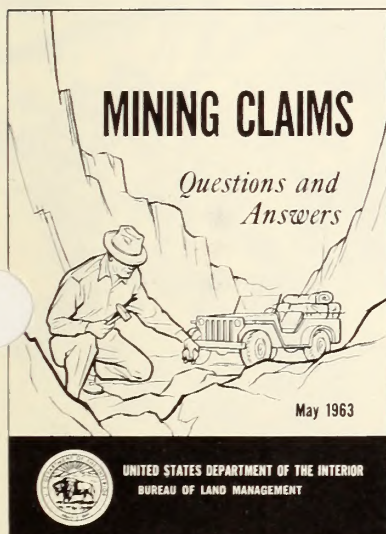


October 27, and ends on Wednesday, October 30.

Three New Publications Released by BLM

Three new publications have been released by the Bureau of Land Management, and their titles emphasize the wide variety of matters handled by BLM. Two publications are free, and one is available from the Superintendent of Documents.

Mining Claims—Questions and Answers provides the answers to most commonly asked questions about how the mining law of 1872



applies to you. Covering such matters as "What is a mining claim?" and "How do I go about locating a claim?" in nontechnical language, the 16-page leaflet is a handy guide for amateur and professional prospectors. Administration of the U.S. mining laws to "promote the development of the mining resources of the United States" is one of the Bureau's primary responsibilities.

Community Recreation and the Public Domain is a guidebook for State, city, and county officials concerned with the Recreation and Public Purposes Act, and explains the procedures by which local governments and nonprofit organizations may obtain lease or patent to public lands for recreation, health, and welfare purposes. The 40-page booklet contains sample plans of development, and copies of the act and applicable Federal regulations.

Both *Mining Claims—Questions and Answers* and *Community Recreation and the Public Domain* may be obtained from local BLM offices or from the Director, Bureau of Land Management, Washington, D.C., 20242.

The annual star guide for cadastral surveyors, *The Ephemeris*, 1964, has again been placed on general sale. Prepared for BLM surveyors in the field but used widely by other professional surveyors, *The Ephemeris* is an astronomical almanac which gives basic information for determining geographical position by use of the stars. Published every year since 1908, *The Ephemeris* is the only official manual of its kind intended for use by surveyors rather than astronomers.

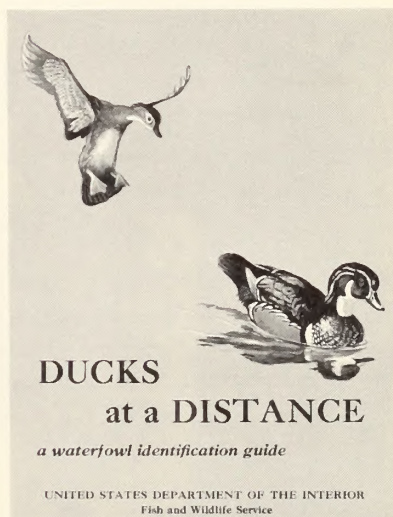
Prepared by the Nautical Almanac Office, U.S. Naval Observatory, the booklet traces the daily position of the sun and hourly changes in the declination, upper culmination, and elongation of Polaris (the North Star). Twenty-eight other stars are given in semimonthly position.

The Ephemeris, 1964 may be obtained for 40 cents from the Su-

perintendent of Documents, Government Printing Office, Washington, D.C., 20402.

New Waterfowl Identification Guide Published for Duck Hunters

A colorful waterfowl identification guide, illustrated by noted wildlife artist Bob Hines and published by the Department of the Interior's Fish and Wildlife Service, *Ducks at a Distance* offers invaluable clues for students, hunters, and everyone who enjoys a bird walk in the autumn.



The 24-page field guide is designed for the hunter, and illustrates the plumage of all major species during fall migration.

Ducks at a Distance is available from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402, at 25 cents a copy. For convenience of hunters, birdlovers, students, clubs, and other groups, a 25-percent discount is allowed on all purchases of 100 or more copies mailed to one address.

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Blacktail Deer

Jim Yoakum